

Mathematical Biosciences

an international journal

Volume 84

YOHEI II (Osaka, Japan), RYOICHI KIKUCHI (Seattle, WA),
AND KIYOSHI MATSUOKA (Osaka, Japan)

Two-Dimensional (Time and Multiplicity) Statistical Analysis of Multiple Tumors	1
CLARE M. MAHAN (New York, NY), CHIN LONG CHIANG (Berkeley, CA), AND JOHN B. O'SULLIVAN (Boston, MA)	
Mathematical Modeling of Early Diabetes Mellitus	23
LARRY S. LIEBOVITCH, JORGE FISCHBARG, AND JAN P. KONIAREK (New York, NY)	
Ion Channel Kinetics: A Model Based on Fractal Scaling Rather Than Multistate Markov Processes	37
L. P. LEFKOVITCH (Ottawa, Ontario)	
Optimal Attribute Sets for Identifications and Diagnoses	69
HERBERT W. HETHCOTE AND JAMES W. VAN ARK (Iowa City, IA)	
Epidemiological Models for Heterogeneous Populations: Proportionate Mixing, Parameter Estimation, and Immunization Programs	85

BOOK REVIEWS

JACQUES BÉLAIR

<i>An Essay on the Importance of Being Nonlinear</i> (Bruce J. West)	119
MARC MANGEL	
<i>Bioeconomic Modelling and Fisheries Management</i> (Colin W. Clark)	121
ROBERT RANSOM	
<i>Biological Information Processing: Current Theory and Computer Simulation</i> (Jeffrey R. Sampson)	123

ANNOUNCEMENT	125
------------------------	-----

Elsevier

C. WISSEL AND T. SCHMITT (Marburg, Federal Republic of Germany)	
How to Avoid Extinction of Populations Optimally Exploited	127
BRUCE THOMPSON AND CHARLES A. ROHDE (Baltimore, MD)	
Probability of Response Models and DNA Repair:	
A Statistical-Biological Approach	139
G. EASON (Glasgow, United Kingdom)	
On the Metabolic Pump in the Renal Medulla	155
WOLFGANG ALT (Bonn, West Germany) AND JOHN J. TYSON	
(Blacksburg, VA)	
A Stochastic Model of Cell Division	
(with Application to Fission Yeast)	159
KARL SIGMUND (Wien, Austria)	
A Maximum Principle for Frequency Dependent Selection	189
H. E. LAYTON (New York, NY)	
Existence and Uniqueness of Solutions to a Mathematical Model	
of the Urine Concentrating Mechanism	197
SHI-PING MA AND GEORGE I. ZAHALAK (St. Louis, MO)	
A Simple Self-Consistent Distribution-Moment Model for Muscle:	
Chemical Energy and Heat Rates	211
M. N. ANTONIOS (Memphis, TN)	
A Mathematical Model of Two-Trophic-Level	
Aquatic Systems with Two Complementary Nutrients	231

Elsevier

